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Early Tantric Hemerology in Chinese Buddhism

Timing of Rituals According to Śubhakarasiṁha and Yixing

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Abstract

This study examines the hemerology explained by Śubhakarasiṁha/Shanwuwei 善無畏 (637–735) and Yixing 一行 (673/683–727) in their commentary on the *Mahāvairocana-sūtra*. It is argued that this section reflects the astrological interests of the early Tantric Buddhist tradition. It is furthermore pointed out that Yixing's own astronomical ideas are incorporated into the explanation. The commentary's limited details, however, would not have enabled a Chinese reader to determine auspicious times on their own without consulting a specialist in Indian astrology, a point which indicates that the commentary was produced for a court audience.

Introduction

This study explores the first introduction of what I call “Tantric hemerology”¹ into China during the 720s through the efforts of the Indian master Śubhakarasiṁha 善無畏 (637–735) and his disciple, the astronomer-monk Yixing 一行 (673/683–727),² whose instructions are preserved

¹ There is no consensus at present with respect to the terms *Mantrayāna*, Esoteric Buddhism and Tantric Buddhism as they relate to East Asia. For a recent discussion, see Charles D. Orzech et al., “Introduction: Esoteric Buddhism and the Tantras of East Asia: Some Methodological Considerations,” in *Esoteric Buddhism and the Tantras of East Asia*, eds. Charles D. Orzech et al. (Leiden: Brill, 2011), 3–18. Buddhists in East Asia never referred to a “Tantric Tradition,” but a modern scholar can still clearly draw lines between “Indian Tantra” and what we see in East Asia. In my opinion, one of the defining features of Tantric Buddhism, which stands in contrast to earlier *dhāraṇī* practices, is the belief in the possibility of attaining full buddhahood in a single lifetime, rather than having to practice the bodhisattva path over immeasurable lifetimes. This is clear from the *Mahāvairocana-sūtra*, which states, “Moreover, he manifested the appearances of *vajradharas*, and the bodhisattvas Samantabhadra and Padmapāṇi, and proclaimed throughout the ten directions the pure-worded Dharma of the Mantra path: that the stages from the first generation of [bodhi-]*citta* up to tenth [can be] progressively fulfilled in this lifetime 又現執金剛, 普賢, 蓮華手, 菩薩等像貌, 普於十方, 宣說真言道清淨句法, 所謂初發心乃至十地, 次第此生滿足 (T 848, 18: 1b2-4).” This idea is further explained in the commentary: “The gate into the entry of Mantra generally includes three items. The first is the gate related to the mysteries of body. The second is the gate related to mysteries of speech. The third is the gate related to mysteries of mind. These matters will be broadly discussed below. The practitioner purifies their three karmas through these three means. It is by being empowered [**adhiṣṭhāna*] with the three mysteries of the Tathāgata that it is possible to fulfill the *bhūmis* and *pāramitās* in this lifetime, and not further pass through numbers of *kalpas* 入真言門略有三事, 一者身密門, 二者語密門, 三者心密門。是事下當廣說。行者以此三方便, 自淨三業, 即為如來三密之所加持, 乃至能於此生滿足地波羅密, 不復經歷劫數 (T 1796, 39: 579b27-c2).”

² Chen Jinhua has demonstrated that 673, rather than the traditionally assigned year of 683, is a more reasonable year of birth for Yixing based on several factors. See Chen Jinhua, “The Birth of a Polymath: The Genealogical Background of the Tang Monk-Scientist Yixing (673-727),” *Tang Studies* 18-19 (2000-2001): 26–31.

in the commentary on the **Mahāvairocana-sūtra* (Ch. *Darī jīng shù* 大日經疏; T 1796). These instructions are significant to Chinese Buddhist history because they include the first authoritative prescription to observe the seven-day week. The commentary mentions a number of features of the contemporary Indian calendar, which shows how Śubhakarasiṁha understood Buddhist hemerology. This, in turn, also reveals the hemerological conventions of the early Tantric movement of Nālanda.³ It is furthermore demonstrated that remarks in the commentary indicate an elite audience, a point that suggests that these teachings were originally meant for monks at court with access to Indian astronomers, which became an issue in later decades when Mantrayāna teachings fell into the hands of common Chinese monks.

Buddhist Hemerology

The term “hemerology” (from Greek *hēmérā*, “day” + *logy* “study of”) denotes “the cultural practice of connecting the success or failure of actions with favorable or unfavorable days defined by the calendar.”⁴ Hemerology is an important element in the execution of the *vinaya* or monastic codes of the sangha. According to various versions of the *vinaya*, the dates of *poṣadha* (the formal meeting of *bhiksus*, during which time repentance and sangha business are carried out) are decided based primarily on the *tithis*. A *tithi* represents one day of a fifteen-day *pakṣa*. A

³ Concerning Śubhakarasiṁha’s roots in Nālanda, Li Hua 李華 (715-766), a lay disciple of Śubhakarasiṁha, writes that his teacher “was a man of Magadha in Middle India, having resided at the monastery of Nālanda of the city Rājagrīha 中印度摩伽陀國人, 住王舍城那爛陀寺” (T 2055, 50: 290a9-10).

⁴ Kocku von Stuckrad, “Hemerology,” In *Brill’s New Pauly*, eds. Hubert Cancik and Helmuth Schneider, accessed 17 July 2017, http://dx.doi.org/10.1163/1574-9347_bnp_e1128610.

pakṣa is one half of a lunar month, which is why there are two *pakṣas*: the “bright” *śukla-pakṣa* (waxing period) and the “dark” *kṛṣṇa-pakṣa* (waning period). The lunar phases can also be considered alongside the *nakṣatra* calendar, although this is not necessarily required. A *nakṣatra* is one of twenty-seven or twenty-eight constellations along the ecliptic through which the Moon transits over 27.32 days. Each *nakṣatra* possesses its own qualities, which is why lunar convergences with some *nakṣatras* are preferable to others.⁵ The observance of *tithis* and *nakṣatras* together is mentioned in the *Mahāsāṃghika-vinaya* 摩訶僧祇律 (T 1425), which was translated into Chinese between 416–418:⁶

爾時，尊者阿難共行弟子，欲行摩那埵。白佛言：世尊，我共行弟子，欲詣聚落中小住處行摩那埵，時是十四日。佛語阿難：此十四日，星宿隨順，時隨順，眾隨順。應作布薩竟然後去。

At that time, Venerable Ānanda was travelling together with disciples and wanted to perform *mānatva* [i.e., repentance]. He said to the Buddha, “World Honored One, I am travelling with disciples, and wish to go to the village to perform *mānatva* in a small dwelling. The time is the 14th day.” The Buddha said to Ānanda,

⁵ The earliest Buddhist scripture to explain the *nakṣatras* in detail is the *Śārdūlakarṇāvadāna*, now included in the *Divyāvadāna* collection. In light of manuscript evidence, the earliest recension probably dates to the third century CE. For a Sanskrit edition, see Sujitkumar Mukhopadhyaya, ed., *Śārdūlakarṇāvadāna* (Viśvabharati, 1954). Chinese translations are T 1300 and T 1301. For relevant discussion of these, see Jeffrey Kotyk, “Iranian Elements in Late-Tang Buddhist Astrology,” *Asia Major* 30, no. 1 (2017): 28–29.

⁶ For details on the *Mahāsāṃghika-vinaya*, see Shayne Clarke, “Vinayas,” in *Brill’s Encyclopedia of Buddhism*, vol. I, ed. Jonathan A. Silk (Leiden: Brill, 2015), 64.

“This 14th day agrees with the *nakṣatras*, time and assembly⁷—you should leave after performing *poṣadha*.⁸

The *tithis* and *nakṣatras* were the primary hemerological elements taken into consideration within Indian Buddhism of the early centuries CE. However, non-Indian systems of astronomy and astrology were increasingly adopted in India from the Gupta dynasty onward. As Martin Gansten notes, “By the 5th century, Greek astronomy was well-established in India, as is clear from the astronomer Āryabhaṭa’s (b. 476 CE) work, known simply as the Āryabhaṭīya.”⁹ The astrologer Varāhamihira (505–587) wrote the *Pañcasiddhāntikā*, which summarized five astronomical texts including two titled *Romakasiddhānta* (“Roman astronomical treatise”) and a *Pauliśasiddhānta* (“Paulus’s astronomical treatise”), demonstrating the extent of Western astronomy present by this period.¹⁰ At the same time, the simultaneous introduction of foreign astrology is exemplified by the *Yavanajātaka*, a manual of horoscopy in Sanskrit.¹¹ Although it is tempting to suggest a direct transmission from Greek sources into Sanskrit, we must bear in mind that Sassanian Iran translated into Pahlavī both Hellenistic and Indian astrological texts from the third cen-

⁷ The *nakṣatra* in which the Moon is lodged ought to be auspicious. It is uncertain what ‘assembly’ (*zhong* 署) here refers to specifically.

⁸ T 1425, 22: 447a15-19.

⁹ Martin Gansten, “Astrology and Astronomy (Jyotiṣa),” in *Brill’s Encyclopedia of Hinduism*, vol. 2, ed. Knut A. Jacobsen et al (Leiden: Brill, 2010), 281.

¹⁰ David Pingree, “The Recovery of Early Greek Astronomy from India,” *Journal for the History of Astronomy* 7 (1976): 110.

¹¹ For translation, see David Pingree, *The Yavanajātaka of Sphujidhvaja* (Cambridge, MA: Harvard University Press, 1978). The dating of this work by Pingree to 269–270 was accepted for a few decades, but recently Bill M. Mak has disputed this on the basis of manuscript evidence, suggesting that it “is dated after 22 CE and could be as late as the early seventh century.” Bill M. Mak, “The Transmission of Greek Astral Science into India Reconsidered – Critical Remarks on the Contents and the Newly Discovered Manuscript of the *Yavanajātaka*,” *History of Science in South Asia* 1 (2013): 17.

tury CE,¹² hence we cannot rule out Iranian intermediaries. The transmission of astrology into India from the Near East, which commences from around the late fourth century CE, brought with it elements such as the twelve zodiac signs and the seven-day week. These elements were gradually incorporated into Buddhist literature and practice, noticeably starting from the late seventh century when the early Tantric movement arose.

Historical Background – The *Mahāvairocana-sūtra*

The early Tantric Buddhist movement in India appears suddenly in the historical record. This is evident from the fact that Xuanzang 玄奘 (602–664), who travelled in India between 629–645, does not appear to have been aware of any specific movement connected with “mantra,” but a Chinese monk named Wuxing 無行 (b. 630), whom Yijing mentions in the year 685, wrote a letter home stating, “Recently the new Mantra teachings have become revered in the country 近者新有真言教法舉國崇拜.”¹³ It is clear that the Buddhist movement connected with mantra, i.e., Mantrayāna, visibly emerged during the second half of the seventh century.¹⁴ An important scripture from this time is the *Mahāvairocana-sūtra* 大日經 (T 848), also known by its Sanskrit title of *Vairocanābhi-*

¹² David Pingree, *From Astral Omens to Astrology: From Babylon to Bīkāner* (Rome: Ist. Italiano per l'Africa e l'Oriente, 1997), 49–50.

¹³ This line is preserved in a Japanese work by Annen 安然 (841–915?), the Shingon shūkyō jigi 真言宗教時義. Wuxing’s original letter (南荊州沙門無行在天竺國致於唐國書一卷) is not extant. It was brought to Japan by the Japanese monk Ennin 圓仁 (794–864) in 847. See T 2396, 75: 431a11 and T 2167, 55: 1086c21–22.

¹⁴ The above details concerning Xuanzang and Wuxing are explained in Yoritomi Motohiro 賴富本宏, “Mikkyō no kakuritsu” 密教の確立, in *Indo mikkyō インド密教*, eds. Tachikawa Musashi 立川武蔵 and Yoritomi Motohiro (Tōkyō: Shunjūsha, 1999), 37.

sambodhi-sūtra.¹⁵ Wuxing carried this text with him on his return to China, but died along the way. These details are reported by Zhisheng 智昇 (669–740) in his catalog of Buddhist texts compiled in 730, titled *Kaiyuan shijiao lu* 開元釋教錄 (T 2154):

沙門無行西遊，天竺學畢言歸迴。至北天不幸而卒。所將梵本有勅迎歸。比在西京華嚴寺收掌。無畏與沙門一行，於彼簡得數本梵經，並總持妙門，先未曾譯。至十二年隨駕入洛，於大福先寺安置。遂為沙門一行譯大毘盧遮那經。

The śramaṇa Wuxing had traveled west, and upon completing his studies in India said he would return. He unfortunately died in northern India. It was ordered that the Sanskrit texts he carried be retrieved. These were deposited at Huayan-si in the western capital [Chang'an]. Śubhakarasiṁha and Yixing selected a number of Sanskrit scriptures there plus *dhāraṇī* practices. They had previously never been translated. In year 12 [724] they followed the emperor to Luoyang, where they were posted to the temple Dafuxian-si. The *Mahāvairocana-sūtra* was subsequently translated by śramaṇa Yixing [and Śubhakarasiṁha].¹⁶

After translating the text, Yixing produced a commentary on it based on oral explanations given by Śubhakarasiṁha, which was completed sometime before Yixing's death in 727.¹⁷ Śubhakarasiṁha, we

¹⁵ Extant in Chinese and Tibetan translations, fragments of the original Sanskrit exist. See Matsunaga Yūkei 松長有慶, “*Dainichikyō no bonbun danpen nitsuite*” 大日經の梵文斷編について. *Indogaku Bukkyōgaku kenkyū* 印度學佛教學研究14, no. 2 (1966): 853–860. For a full survey of research materials related to this text, see Yamamoto Shōichirō 山本匠一郎, “*Dainichikyō no shiryō to kenkyūshi gaikan*” 『大日經』の資料と研究史概觀, *Gendai mikkyō* 現代密教 23 (2012): 73–102.

¹⁶ T 2154, 55: 572a15–21.

¹⁷ It should be noted that the authorship of the commentary has been disputed in the past, but evidence nevertheless indicates that, in fact, the traditional attribution is cor-

should note, was an Indian master from Nālanda responsible for introducing the entire system of the *Mahāvairocana-sūtra*, including its text, *mandala* and ritual practices. The commentary therefore offers an important perspective from an individual representative of the early Tantric movement. With respect to the section describing calendrical concerns, Yixing's remarks, which are interspersed throughout the commentary, are valuable, given his role as a court astronomer.¹⁸ We will now turn to the content of the commentary itself.

Tantric Hemerology

Tantric hemerology is different from the system employed in the *vinaya* as discussed earlier, although it still takes into consideration the *pakṣa* cycle and *nakṣatras*. One distinguishing feature of the practice of *Maṇtrayāna* or Tantric Buddhism is that it requires *abhiṣeka* (an initiation or consecration) from a lineage holder, the drawing of a *mandala* (an iconic representation of the deities of the associated text), and an altar or sanctified space within which the relevant rituals are carried out. In the early tradition of Tantric Buddhism,¹⁹ the creation of the *mandala* has to be

rect. For discussion, see Kotyk, “Iranian Elements in Late-Tang Buddhist Astrology,” 30–31.

¹⁸ The *Jiu Tang shu* 舊唐書 (Zhonghua Shuju edn., vol. 4, 1293), a history of the Tang dynasty (618–907) compiled by Liu Xu 劉昫 (887–946) in 945, reports that Yixing in 721 was ordered to produce a new state calendar after the existing calendar repeatedly failed to predict solar eclipses. Until his passing in 727, Yixing was actively involved in calendrical science and astronomy at court.

¹⁹ The emphasis on astrological considerations appears to have been reconsidered later on in Tantric Buddhism. Christian K. Wedemeyer points out that “the frequently-repeated injunctions in *Mahāyoga Tantra* materials against taking account of astrological phenomena such as lunar mansions (*nakṣatra*), lunar days (*tithi*), and so on, in ritual practice would seem to be a response to earlier esoteric scriptures that enjoin practi-

timed so as to take place when it is considered astrologically auspicious. This is expressly stated in the *Mahāvairocana-sūtra*. In the second chapter of the text the following prescription is stated:

遇良日晨，定日時分宿直諸執皆悉相應，於食前時值吉祥相者。

... on the morning of a propitious day, having determined a day on which the time, lunar mansion [*nakṣatra*], and planets are all in harmony, and at a time before the [morning] meal, with an auspicious sign.²⁰

The text does not specifically define a propitious day, and the definition of such a day according to the Indian system would not have been readily understood by Chinese readers. There were many such unclear parts of the text, and this was likely one reason that Yixing compiled a commentary on the text with Śubhakarasiṁha.

The commentary provides the following remarks concerning the definition of a propitious day. These remarks are highly significant as they reflect Śubhakarasiṁha's understanding of hemerology, in addition

tioners, on the contrary, to schedule their ritual activities in accordance with such considerations." Christian K. Wedemeyer, *Making Sense of Tantric Buddhism: History, Semiology, and Transgression in the Indian Traditions* (New York: Columbia University Press, 2014), 241n64. For example, the *Cittaviśuddhiprakaraṇa* (verses 71-75) mentions technical features of astrology, but also suggests that one should not be attached to these, which are "conceptually posited by the whole world." See Christian K. Wedemeyer, "Vajrayāna and its Doubles: A Critical Historiography, Exposition and Translation of the Tantric Works of Āryadeva" (PhD diss., Columbia University, 1999), 371. The urge to dismiss concerns for astrology perhaps points to widespread and deep interest in astrology among Buddhist practitioners.

²⁰ See the following English translation of the sutra: *Vairocanābhisam̄bodhi Sūtra*, trans. Rolf W. Giebel (Berkeley: Numata Center for Buddhist Translation and Research, 2005), 19. T 848, 18: 4c4-5.

to constituting the first attempt in Chinese Buddhism to address the technical challenges posed by employing an Indian calendar within a Chinese context, a topic with which Yixing was suitably familiar.²¹ These comments furthermore constitute the first outline of Tantric hemerology in Chinese Buddhism. They are thus reproduced in full, with my explanation given following each section.²²

因擇地事便明擇時支分也。凡所爲法事皆須與時義契合。今將擇治此地，故於吉日警發地神。餘法事例可知耳。

Selection of the period of time is explained when there is selection of the location. All Dharma rituals must be in accord with the temporal considerations. Now there is to be a selection and preparation of this location. Thus, on an auspicious day the earth deities are alerted. The other Dharma rituals can be understood based on the example.

This explains that selection and preparation of a venue for ritual activities requires additional temporal considerations, specifically identifying an auspicious day, which here seems to be connected with consideration of local deities, who, if displeased, might create obstacles.

良日晨者。謂作法當用白分月，就中一日三日五日七日十三日皆爲吉祥，堪作漫荼羅。又月八日十四日十五日最勝，至此日常念誦，亦應加功也。

²¹ Yixing's calendar, the *Dayan li* 大衍曆, likely incorporated Indian elements. See Ohashi Yukio, "Astronomy and Mathematics of Yixing," in *Mapping the Oriental Sky: Proceedings of the Seventh International Conference on Oriental Astronomy*, eds. Nakamura Tsukō et al (Tōkyō: National Astronomical Observatory of Japan, 2011), 172. The text of the *Dayan li* is found in the *Xin Tang shu* 新唐書 (Zhonghua Shuju edn., vol. 3, 637–691), a history of the Tang dynasty compiled by Ouyang Xiu 歐陽修 (1007–1072) and Song Qi 宋祁 (998–1061) in 1060.

²² Chinese text below extracted from T 1796, 39: 617c18-b14.

... *the morning of a propitious day*: The ceremony should occur during the waxing period of the month (*śukla-pakṣa*), of which the first, third, fifth, seventh and thirteenth are all considered auspicious, and one may make the *maṇḍala*. Furthermore, the eighth, fourteenth and fifteenth of the month are supreme. On these days constantly do recitations; furthermore, one should make extra efforts.

The definition of the second sentence describing the supreme *tithis* is identical to that found in the Abhidharma work titled **Abhidharma-mahāvibhāṣā* (T 1545), which gives the following explanation:

問：何故唯說三十三天。答：以彼諸天數數雲集，論善惡事，故偏說之。謂彼諸天於白黑月，每常八日，若十四日，若十五日，集善法堂，稱量世間善惡多少。復次，三十三天常共同察造善惡者，見造善者，便擁護之。見造惡者，即共嫌毀。是故偏說。

Question: Why only speak of thirty-three devas? Answer: The devas frequently gather to debate good deeds and misdeeds, hence the partial discussion of them. The devas during the waxing and waning moons on every eighth, fourteenth and fifteenth always gather in the Hall of Sudharma²³ to weigh the volume of good deeds and misdeeds in the world. Furthermore, the thirty-three devas constantly together inspect the makers of good deeds and misdeeds. Seeing one who has done good deeds, they then protect them. Seeing one who has done misdeeds, they then resent them. Hence the partial discussion of them.²⁴

²³ Located in the city of Indra (善見城). See T 24, 01: 341b7-8.

²⁴ T 1545, 27: 211c10-15.

The auspiciousness of specific days in this context is due to a recurring cycle of powerful deities descending into the world. What, however, is the significance of the other five *tithis* defined in the first sentence of the commentary? This is likely connected with more mainstream Indian hemerology, in which the *tithis* each have their respective names. Yano Michio lists these as they are specified by a certain “Garga” in Utpala’s commentary of the 98th chapter of Varāhamihira’s (505–587) *Bṛhatsaṃhitā*, a major Indian astrology manual. The first *tithi* is called *pratipad* (“beginning”), the third is *balā* (“powerful”), the fifth is *pūrṇā* (“full”), the seventh is *mitrā* (“friendly”), and the thirteenth is *jayā* (“victorious”).²⁵ In light of this, we can infer that the definition of auspicious *tithis* in the commentary relies upon both Buddhist and non-Buddhist sources. Returning to the commentary:

定日者。西方曆法通計小月，合當何日。若小月在白分內者，其月十五日即屬黑分，不堪用也。又曆法通計日月，平行度作平朔，皆合一小一大。緣日月於平行中又更有遲疾，或時過於平行或時不及平行，所以定朔或進退一日。定望或在十四日或在十六日。大抵月望正圓滿時，名爲白分十五日。月正半如弦時，亦爲八日。但以此准約之，即得定日也。

having determined a day: The Western calendar calculates lesser months [i.e., a *pakṣa* with less than fifteen days]. What are the corresponding days? If the lesser month is in the waxing period of the month, the fifteenth of that month will end up belonging to the waning period (*kṛṣṇa-pakṣa*). It cannot be used.²⁶ Also, the calendar calculates the Sun and the Moon. The date of the averaged new Moon is based on its averaged degrees of movement. It

²⁵ Yano Michio 矢野道雄, *Mikkyō senseijutsu* 密教占星術 (Tōkyō: Tōyō Shoin, 2013), 128–129.

²⁶ If the waning commences on the fifteenth, then that day is part of an extended-sixteen day *kṛṣṇa-pakṣa*.

will always incorporate a lesser [29] or greater [30] month. Sometimes [the date for the new Moon] will pass or be late with respect to the averaged movements of the Sun and Moon as their speeds will also differ. This is why a fixed new Moon²⁷ will sometimes be ahead or behind a day. A fixed full Moon will sometimes be on the fourteenth or on the sixteenth. For most months, the time when the Moon is completely full is designated as the fifteenth day of the waxing period. The time when the Moon is exactly half like a bow string will be the eighth. It may be arranged based on this, and then one can determine the day.

Here we find Yixing discussing new and full Moons determined according to an average or fixed time. This is a topic upon which he touched in his calendrical discussions. The *Liben yi* 曆本議 (“Discussion on the Calendar”) is a summary of Yixing’s comments on old and new calendrical systems that was compiled following his death. We see therein the following remarks, which appear to echo the above statements in the commentary:

古者平朔，月朝見曰朏，夕見曰朓。今以日之所盈縮，月之所遲疾，損益之，或進退其日，以為定朔。

With respect to the averaged new Moon of the ancients, the Moon appearing in the morning is called the “Moon rising at sunrise,” while appearing in the evening is called the “Moon rising at sunset.” Now these are decreased or increased [i.e., modified] according to the progression of the Sun and the velocity of the Moon. [The fixed new Moon] will sometimes progress ahead of or

²⁷ A fixed new Moon here refers to the convention of establishing a fixed day of the month as the new Moon regardless of whether the Moon is observed to be waxing or waning. In practice this means that the nominal new Moon will sometimes be out of sync with the true new Moon by up to a day.

fall short of that day [i.e., the averaged new Moon, which is traditionally defined as the first day of the lunar month]. This is considered a fixed new Moon.²⁸

Yixing preferred using a precise definition of lunar phases, rather than one based on averages, since the latter results in only nominal new and full Moons, but in the commentary, he seems to suggest a degree of compromise, most likely to accommodate the sangha, few members of which were specialized in astronomy.

時分者。西方曆法，晝夜各有三十時。一一時別有名號。如晝日即量影長短計之，某時作事則吉，某時則凶，某時中平。各各皆有像類。

the divisions of time: In the Western calendar, day and night are altogether comprised of thirty units of time [*muhūrta*]. Each unit of time has its designation. If it is daytime, one may then measure the length of a shadow. At one time it is auspicious to do something. At one time it is inauspicious. At one time it is neutral. Each have their respective imageries.

A *muhūrta* is comprised of forty-eight modern minutes, which stands in contrast to the Chinese system of dividing the day into twelve units of time, each comprised of two modern hours. Although the thirty *muhūrtas* are mentioned in the early fourth century translation of the *Śārdūlakarṇāvadāna* (T 1301, 21: 416b29-c1), as well as the **Mahāprajñāpāramitā-upadeśa* 大智度論 (T 1509, 25: 409b26) translated by Kumārajīva 鳩摩羅什 (344–413), and therefore were known to Chinese Buddhists early on, it does not appear that the Chinese sangha ever at-

²⁸ *Xin Tang shu*, Zhonghua Shuju edn., vol. 2, 591. These remarks incidentally lend additional evidence in support of the traditional attribution of the commentary to Yixing.

tempted to implement them, preferring instead to use the Chinese reckoning of dividing the day.

言宿直者。謂二十七宿也。分周天作十二房，猶如此間十二次。每次有九足，周天凡一百八足，每宿均得四足，即是月行一日裎。經二十七日，即月行一周天也。依曆算之。月所在之宿，即是此宿直日。宿有上中下，性剛柔躁靜不同。所作法事亦宜相順也。

lunar mansion convergences: The twenty-seven *nakṣatras*. The ecliptic²⁹ is divided into twelve chambers like the twelve Jupiter stations here [in China]. Each station has 9 quarters [*pāda*]. The ecliptic is altogether 108 quarters. Each *nakṣatra* gets four quarters, which constitutes the course of movement that the Moon travels in one day. The Moon has gone once around the ecliptic after transiting for twenty-seven days. It is calculated according to the calendar. The *nakṣatra* in which the Moon is present will constitute a convergence with this *nakṣatra*.³⁰ The *nakṣatras* possess a hierarchy, and they differ by nature with respect to their strengths and weaknesses, as well as action and inaction. The ritual to be performed should also be in accord.

The *nakṣatras* were originally a set of twenty-eight lunar stations of varying unequal proportions, but here in the 720s we see the appearance of a system of twenty-seven *nakṣatras* of equal dimensions for the first time in a Buddhist context. Earlier texts such as the *Śārdūlakarṇāvadāna* de-

²⁹ The Chinese here could also refer to the celestial equator, but given the Indian context I am inclined to think that this is in reference to the ecliptic.

³⁰ The *nakṣatra* presiding over a day is determined by the *nakṣatra* in which the Moon is lodged.

scribe twenty-eight *nakṣatras* of unequal dimensions.³¹ The *nakṣatra* of Abhijit 牛宿 is dropped from the set of twenty-seven. These twenty-seven *nakṣatras* are defined in relation to the twelve zodiac signs (the zodiac signs have always been of uniformly equal dimensions), which marks a notable departure from the traditional Indian system. The ecliptic is comprised of 108 *pādas*, with each zodiac sign comprised of nine *pādas*, and each *nakṣatra* comprised of four *pādas*. This possibly helps to explain why twenty-seven *nakṣatras* were preferred: $108/28 = 3.85$, whereas twenty-seven divides into integers ($108/27 = 4$). This model is the Indian theory of *navāṇas* or ninths of a zodiac sign. This reform most certainly occurred after the introduction of Hellenistic astronomy into India, marking a significant departure from the earlier *nakṣatra* systems as defined in texts such as the *Śārdūlakarṇāvadāna*. The commentary, however, does not provide any substantial details on the new system, and thus the Chinese reader would have been unable to determine the *nakṣatra* presiding over a specific day without additional information. To complicate matters further, Chinese observational astronomy uses an indigenous set of twenty-eight lunar stations, whose parameters are different from any system of Indian *nakṣatras*, and thus the Chinese already had a long-standing system of their own. This explains why the Chinese sangha never attempted to reform their system in favor of this new system. Instead, they simply used their own lunar stations as functional equivalents for the *nakṣatras*, and moreover preferring to use a set of twenty-eight.

³¹ For a comparison of the varying dimensions in different recensions of the *Śārdūlakarṇāvadāna*, see Zenba Makoto 善波周, “*Matōga gyō no tenmonrekisū ni tsuite*” 摩登伽經の天文曆數について, in *Tōyōgaku ronsō: Konishi, Takahata, Maeda san kyōju shōju kinen* 東洋學論叢：小西高畠前田三教授頌壽記念 (Kyōto: Heirakuji shoten, 1952), 174–182.

The linking of the twelve zodiac signs with the twelve Jupiter stations is significant because this became standard practice in Chinese astrology. Yixing is therefore to be credited as the first author to establish this association. This is also expressly stated in notes for Yixing's *Dayan li* calendar, in which the twelve zodiac signs of India are equated to the twelve Jupiter stations of China: "The twelve palaces [zodiac signs] as they are called in India are the twelve Jupiter stations of China. The palace of *Meṣa [Aries] is the Jupiter station of Jianglou."³² As with the *nakṣatras* and Chinese lunar stations, Chinese observational astronomy ultimately preferred to use the twelve Jupiter stations as functional equivalents for the zodiac signs.

諸執者。執有九種，即是日月火水木金土七曜，及與羅睺計都合爲九執。羅睺是交會食神。計都正翻爲旗，旗星謂彗星也。除此二執之外，其餘七曜相次直日，其性類亦有善惡，如梵曆中說。

planets: there are nine *graha*, which are the Sun, the Moon, Mars, Mercury, Jupiter, Venus and Saturn (the seven luminaries).³³ If combined with Rāhu and Ketu, they altogether comprise nine *graha*. Rāhu is the nodal eclipse deity. Ketu is directly translated as banner. The banner star is a comet. Apart from these two planets, the other seven have their sequential convergences [i.e., the days of the week]; their qualities also differ in being either benefic or malefic, as it is explained in the Indian calendar.

Here we find the first Chinese Buddhist prescription to observe the seven-day week. The seven-day week was originally part of a Greco-

³² 天竺所雲十二宮，即中國之十二次。鬱車宮者，降婁之次也. Note here that *yu* 郁 (equivalent to *yu* 有) is a scribal error for another character, perhaps *ming* 鄭. *Xin Tang shu*, Zhonghua Shuju edn., vol. 3, 673.

³³ Note that this is the Hellenistic ordering.

Egyptian religious calendar devised in Alexandria. Yano explains that “the modern ordering of the seven-day week is the outcome of the combination of the Greek cosmological idea of concentric spheres and the Egyptian belief of the planetary gods presiding over the twenty-four hours.”³⁴ Indian Buddhism adopted the seven-day week, but the assignment of planetary deities to each of the twenty-four hours was apparently unknown or simply unimportant in Buddhist India for the simple fact that India divided the day into thirty *muhūrtas* (the *Yavanajātaka* [77.9, 79.55], a non-Buddhist text, briefly mentions the lords of the hours). Thus, the astrological significance of each day was kept intact, but the original Greco-Egyptian reasoning behind the seven-day week was lost.

With respect to the Chinese context, a precise explanation of the seven-day week is given in the contemporary **Navagraha-karaṇa* (Chn. *Jiuzhi li* 九執曆), a manual of mathematical observational astronomy translated in 718 by the court astronomer Gautama Siddhārtha 龍曇悉達 (d.u.). It also provides a method for mathematically determining the day of the week based upon the epoch of the manual (20th of March, 657).³⁵ Yixing would have been aware of this work, which can be inferred based on the fact that his term for “day of the week” (Chn. *chi ri* 直日) is found in the *Navagraha-karaṇa* (SKQS 807: 934b6). Gautama Zhuan 龍曇譜 (712–776), the son of Siddhārtha, incidentally, accused Yixing, after he died, of

³⁴ Yano Michio, “Calendar, Astrology, and Astronomy,” in *The Blackwell Guide to Hinduism*, ed. Gavin Flood (Oxford: Blackwell Publishing, 2003), 384.

³⁵ SKQS 807: 934b. For an English translation of the relevant section see Yabuuchi (1989, 7–9). Yabuuchi Kiyoshi 藪内清, *Zōtei Zuitō rekihō shi no kenkyū* 増訂隋唐曆法史の研究 (Kyōto: Rinsen Shoten, 1989), 7–9.

plagiarizing the *Navagraha-karana*, but this charge was rejected by the court after an investigation.³⁶

The *navagraha* or “nine planets” as a set here are in practice less for hemerological purposes, since their main function within the system of practice of the *Mahāvairocana-sūtra* is as minor deities in the outer section of the *maṇḍala*.³⁷ Rāhu is a mythic Vedic deity thought to consume the Sun and Moon during eclipses,³⁸ but within Indian astronomy he came to be assigned the function of the ascending node of the Moon. Ketu here is understood as representing comets collectively. It is important to note that at this point, in the 720s, Ketu still had this function, rather than its later function as the descending node of the Moon in India and Iran, or as the lunar apogee in China, and furthermore described as the tail of the eclipse deity (Rāhu being the head).³⁹

The last remark: “as it is explained in the Indian calendar,” points to the elite context within which this commentary was written. Access to advanced astronomical and calendrical knowledge was restricted un-

³⁶ *Xin Tang shu*, Zhonghua Shuju edn., vol. 2, 587. For further details, see Tansen Sen, “Gautama Zhuan: An Indian Astronomer at the Tang Court,” *China Report* 31, no. 2 (1995): 202–203.

³⁷ For details on the planetary deities in the *maṇḍala*, see relevant entries Somekawa Eisuke 染川英輔, *Mandara zuten* 曼荼羅圖典 (Tōkyō: Daihōrinkaku, 2013), 177–237.

³⁸ The *Rgveda* (5.40.5) tells of a demon named Svarbhānu afflicting the sun with darkness. In the *Atharvaveda* (19.9.10), Rāhu occurs as a synonym for this demon, while the *Chāndogyopaniṣad* (8.13.1) speaks of the moon escaping ‘from the mouth of Rāhu.’ See Martin Gansten, “Navagrahas,” in Brill’s *Encyclopedia of Hinduism*, vol. 1, eds. Knut A. Jacobsen et al (Leiden: Brill, 2009), 652–653.

³⁹ For details see Yano, *Mikkyō senseijutsu*, 186. Also, Kotyk, “Iranian Elements in Late-Tang Buddhist Astrology,” 47–48. For details on iconography of Rāhu and Ketu, see Jeffrey Kotyk, “Astrological Iconography of Planetary Deities in Tang China: Near Eastern and Indian Icons in Chinese Buddhism,” *Journal of Chinese Buddhist Studies* 30 (2017): 59–60.

der Tang law,⁴⁰ and moreover those literate and skilled in Sanskrit astronomy in China would have employed at court, such as the aforementioned Gautamas. It is therefore unlikely that common Chinese clerics would have had the opportunity to consult such specialists. It is clear that the Chinese practice of the *Mahāvairocana-sūtra* initially was limited to elite members at court.

食前時者。晝夜各有三時。食前可作息災，暮間可作增益，夜可作降伏事也。入漫荼羅灌頂與息災相應，故云食前。

a time before the [morning] meal: The day and night are altogether comprised⁴¹ of three periods. There should be elimination of obstacles prior to eating. In the evening there should be increase of benefits. At night there should be acts related to subduing [enemies]. Entry into the *mandala* and the consecration [*abhiseka*] correspond to the elimination of obstacles, which is why the text states “before eating.”

This definition might initially seem to differ from the conventional reckoning of the day in India, as defined in the *Mahāprajñāpāramitā-upadeśa*, in which a day is defined “from sunrise to sunrise: the first division, middle division and later division, with the night also being three divisions.”⁴² Xuanzang provides this same definition (“five *muhūrtas* make one *kāla*; and six *kālas* make one day and one night”), but he also states,

⁴⁰ See article #110 in the *Tang lü shuyi* 唐律疏議 (Taiwan Shangwu Yinshug Guan edn., 1968, vol. 4, 82). The Tang legal code was first compiled in 624, with subsequent revisions in 627 and 637 before including a commentary in 653, which is the *Tang lü shuyi* (*Commentary on Tang Law Codes*). The received text we presently have is from 737. Anthony J. Barbieri-Low and Robin D.S. Yates, *Law, State, and Society in Early Imperial China: Volume I* (Leiden: Brill, 2015), 233.

⁴¹ This could also read “are each comprised of,” but 各有 used above with respect to *muhūrtas* clearly means “altogether comprised.” See below.

⁴² 曰名從旦至旦，初分中分後分，夜亦三分。T 1509, 25: 409b25-26.

“Secular people divide one day and one night into eight *kālas* (four *kālas* in the daytime and four in the night, each being subdivided into four divisions).”⁴³ In light of this, we might read 畫夜各有三時 in the commentary as “day and night are each comprised of three periods,” even though the following sentence mentions only three specific times. These three specific times appear to be specific times within the framework of the six *kālas* (the general times of morning, sunset and nighttime), rather than being a unique way of dividing the day and night together into three separate periods.

遇善境界意者。謂作法時，或地上或空中有色聲等種種異相。

*meeting with a good state:*⁴⁴ The time to do the rite, when on the earth or in the air there are various types of unusual signs comprised of form, sound and so on.

These include numerous signs that are subsequently explained, such as seeing a young lady carrying vessels of the five dairy flavors, an unexpected rainbow, or strange voices in the sky. The commentary then turns to discussing the need for knowledge of worldly conventions, in which hemerology is evidently included.

所以須順世諦者，以勝義漫荼羅微妙寂滅。醇信白心人尚難信受、況懷疑慮乎。以所度之人，曾習韋陀祠典，伎藝明處。若見造漫荼羅時分舛謬，慮恐致不吉祥便生疑怪，言：「我聞總持智慧者無所不達，而今觀之，尚不能擇得好星善時，況餘深事乎。」由此疑師疑法，故失堅信力反招重罪，故須順彼情機也。復次如是執曜，即是漫荼羅中一種善知識門，彼諸本尊，即能順世間事業而作加持方便。以阿闍梨善擇吉祥時故，與彼

⁴³ Li Rongxi, trans., *The Great Tang Dynasty Record of the Western Regions* (Moraga, CA: BDK America, 1996), 42. T 2087, 51: 875c18-20.

⁴⁴ The Chinese here differs from the original quotation from the sutra.

真言本誓法爾相關，爲作加持，得離諸障也。復次種種世諦門，皆是法界標識。

As to why one must conform to conventional truths, it is because the *maṇḍala* of the ultimate meaning is subtle and quiescent. Those people with pure faith and clear minds still find it difficult to accept, to say nothing of those harboring doubts. The accomplished individual has studied the Vedic scriptures, and is skilled and discerning in the arts. If they see that the *maṇḍala* was created at an erroneous time, they will worry that it will result in something inauspicious, and subsequently this produces apprehension. They will say, “I have heard that there is nothing that those wise in *dhāraṇī* do not accomplish, but now I see this. They cannot even select an auspicious time with good stars. This is to say nothing of other profound matters!” As a result of this, they doubt the teacher and his teaching. They thus lose the power of firm conviction and instead bring about grave transgressions. This is why [conventions] must be in accord with the dispositions of the beings. Furthermore, such *graha* are a gateway to virtuous friends within the *maṇḍala*. Those worthies [of the *maṇḍala*] can create the means for empowerment [*adhiṣṭhāna*] in accord with worldly activities. As the *ācārya* skillfully selects an auspicious time, it will naturally align with their [the deities’] mantras and root vows, producing empowerment, and freedom from obstacles. Furthermore, the various methods of conventional truth are all markers of the *dharma-dhātu*.

The commentary then provides the esoteric interpretations of these terms. For example, the Sun represents fundamental and pure *bodhicitta*, which is the body of Vairocana, while the Moon represents the actions related to *bodhi*. The commentary states that although astrological considerations are worldly, they are still important in order to conform to

mundane conventions, and to gain blessings for worldly endeavors. In this respect, hemerology is not only employed to determine auspicious times, as there is also the aim of gaining the blessings of the *navagraha* deities through astrological knowledge. This is an important development because the planets (*graha*) are conceived of as deities capable of facilitating worldly endeavors. Thus, a basis for astral magic, which would be subsequently developed in later generations in China, is directly affirmed in this commentary.⁴⁵

Although the schedule outlined in the commentary would suffice for determining the day of a ritual within the *pakṣa* cycle, which could easily be converted into Chinese lunar days, the commentary also alludes to several important elements in an astrological schedule that remain unexplained in any detail: the *muhūrtas*, twenty-seven *nakṣatras*, twelve zodiac signs, and the seven-day week. Śubhakarasiṁha and other Indians resident in Chang'an would have been able to provide more detailed instructions on the Indian calendar, and moreover take into consideration the above unexplained elements in determining a suitable date and time of day for a ritual, but most Chinese monks would not have possessed such knowledge. Śubhakarasiṁha and Yixing, it seems, never provided these details in writing. The absence of an authoritative hemerological manual in Chinese was likely one impetus behind the production of the *Xiuyao jing* 宿曜經 (T 1299),⁴⁶ a manual of primarily Indian *nakṣatra* astrology by Amoghavajra 不空 (705–774), first drafted in 759, with a subsequent revision in 764. As the body of Chinese monks practicing *Mahayana* grew, it would most certainly have become apparent that such a

⁴⁵ For detailed discussion of astral magic during the late Tang, see Kotyk, “Iranian Elements in Late-Tang Buddhist Astrology” and “Astrological Iconography of Planetary Deities in Tang China.”

⁴⁶ Yano has shown that the “mainland recension” of Taishō *Xiuyao jing* considerably differs from the “Japanese recension.” The latter stems from texts brought to Japan in the ninth century. See Yano, *Mikkyō senseijutsu*, 226–250.

manual was essential for the Chinese sangha, whereas in the time of Śubhakarasiṁha, the practice of Mantrayāna was restricted to court, where resident Indian monks and astronomers were present.

Conclusion

The foregoing discussion has shown that Tantric hemerology in China commences from when Yixing and Śubhakarasiṁha produced their commentary on the *Mahāvairocana-sūtra* between 724–727. The new Tantric teachings introduced from this time required new astrological considerations with which the Chinese sangha would not have been familiar, which was likely one reason why the commentary discusses this matter, albeit without sufficient detail for a cleric to be able to determine an auspicious day and time using Buddhist texts in Chinese alone.

The discussion in the commentary reveals Śubhakarasiṁha's understanding of hemerology, which includes several elements that were not taken into consideration in earlier Indian Buddhist traditions, in particular the non-Indian concepts of the seven-day week and twelve zodiac signs. This is important to note since Śubhakarasiṁha was arguably a representative of the early Tantric tradition as it emerged around Nālanda during the late-seventh century. Moreover, these additional elements point to an increasing interest on the part of Buddhist institutions in astrology, an art in India that was also simultaneously developing and evolving, often as a result of inputs from foreign sources.

Finally, some of the remarks cited above clearly stem from Yixing's own hand. Yixing himself was a professional astronomer and calendar reformer, and his expertise, which was quite unique for a Buddhist monk in China, is evident in the commentary. This point further demon-

strates that the commentary was, in fact, produced by Yixing and Śubhakarasiṁha, despite some modern doubts to the contrary.

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List of Abbreviations

SKQS *Siku quanshu* 四庫全書. *Ying yin Wen yuan ge Si ku quan shu* 景印文淵閣四庫全書. 1500 vols. Taipei: Taiwan Shangwu Yinshu guan, 1983.

T *Taishō shinshū daizōkyō* 大正新脩大藏經. 100 vols. Takakusu Junjirō 高楠順次郎 and Watanabe Kaigyoku 渡辺海旭 et al., eds. Tokyo: Taishō Issaikyō Kankōkai, 1924–1934. Digitized in CBETA (v. 5.2) and SAT Daizōkyō Text Database (<http://21dzk.lib.tu-tokyo.ac.jp/SAT/satdb2015.php>).

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